



DEPARTMENT OF CHEMISTRY

Where Chemistry Meets Innovation



Admissions Open Chemistry 2025 | JIIT - Noida

About Us

The Department of Chemistry at Jaypee Institute of Information Technology (JIIT), Noida, offers a two year postgraduate program in Chemistry. The department is strengthened by well-equipped laboratories for in-depth understanding of the subject. Furthermore, our program offers elective courses in specialized fields that allow students to explore emerging areas such as green chemistry, bioinorganic chemistry, bioorganic chemistry, spectroscopy, polymer chemistry, computational chemistry, medicinal chemistry, nanotechnology, etc., enhancing their adaptability to pursue careers in diverse fields. The hands-on research project develops critical thinking and sharpens the problem-based learning skills. The department has a vision to become a centre of excellence in chemistry to produce innovative minds with technical mindset.



INTRODUCTION

VISION

To become a centre of excellence in chemical sciences promoting transformative learning and interdisciplinary research.

MISSION

- 1: To create a collaborative and inclusive environment for advanced learning in chemical sciences.
- 2: To empower professionals to lead research and innovation for sustainable solutions
- 3: To create industry-focused and ethically sound technological solutions to real-world challenges

PROGRAMS



✓ 01

PG Program (M.Sc. Chemistry)

- Core + Electives + Research Project (6 months)
- Specialization - Physical, organic, inorganic analytical and industrial chemistry
- Electives: Green Chemistry, Nanotechnology, Polymer Chemistry, Medicinal Chemistry,
- Certificate Courses-Computational Chemistry, Cosmetic and Forensic chemistry
- Career Prospects: Academia, Pharma, chemical and biotech industries

✓ 02

- **Ph.D. Chemistry**
- Research opportunities in emerging areas of science and technology
- Interdisciplinary research option with well equipped department such as Biotechnology, ECE, CSE
- Access to advanced instruments & global research exposure

CURRICULUM - M.SC. CHEMISTRY (FIRST SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	25M11CH111	Group Theory and Photoinorganic Chemistry	3	1	-	4	4
2	25M11CH112	Stereochemistry and Reactive intermediates	3	1	-	4	4
3	25M11CH113	Chemical Dynamics and Electrochemistry	3	1	-	4	4
4	25M11CH114	Quantum Chemistry	3	1	-	4	4
5	25M15CH111	Inorganic Chemistry Lab-I	-	-	4	4	2
6	25M15CH112	Physical Chemistry Lab-I	-	-	4	4	2
7	19M21HS111	Presentation and Communication Skills	2	-	-	2	Audit
		Total	14	4	8	26	20



CURRICULUM - M.SC CHEMISTRY (SECOND SEMESTER)

S.No	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	25M11CH115	Organometallics and Bioinorganic Chemistry	3	1	-	4	4
2	25M11CH116	Organic Reagents and Pericyclic Reactions	3	1	-	4	4
3	25M11CH117	Molecular Spectroscopy	3	1	-	4	4
4	25M11CH118	Supramolecular Chemistry	3	1	-	4	4
5	xxxxxxxx	DE-I	3	-	-	3	3
6	25M15CH113	Inorganic Chemistry Lab-II	-	-	4	4	2
7	25M15CH114	Organic Chemistry Lab-I	-	-	4	4	2
		Total	15	4	8	27	23





CURRICULUM - M.SC CHEMISTRY (THIRD SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	25M11CH211	Nanomaterials and Their Applications	3	1	-	4	4
2	25M11CH212	Industrial Chemistry	3	1	-	4	4
3	25M11CH213	Organic Spectroscopic Techniques	3	-	-	3	3
4	xxxxxxxx	DE-II	3		-	3	3
5	xxxxxxxx	DE-III	3		-	3	3
6	xxxxxxxx	DE-IV	3		-	3	3
7	25M15CH211	Organic Chemistry Lab-II	-	-	4	4	2
8	25M15CH212	Physical Chemistry Lab-II	-	-	4	4	2
		Total	18	2	8	28	24





CURRICULUM - M.SC CHEMISTRY (FOURTH SEMESTER)

S.No.	Course Code	Course Title	Contact Hours				Credit
			L	T	P	Total	
1	XXXXXXXX	DE-V	3	-	-	3	3
2	25M17CH211	Project Work/Dissertation	-	-	20	20	10
		Total	3	-	20	23	13



LIST OF PROPOSED ELECTIVES



DE I	
xxxxxxx	Frontiers in Inorganic Chemistry
xxxxxxx	Environmental Chemistry
xxxxxxx	Nuclear Chemistry
xxxxxxx	Green Chemistry

DE II	
xxxxxxx	Food Chemistry
xxxxxxx	Chemistry of Natural products
xxxxxxx	Computational Chemistry
xxxxxxx	Inorganic Polymers

DE III	
xxxxxxx	Chemoinformatics
xxxxxxx	Bioorganic Chemistry
xxxxxxx	Physical Organic Chemistry- Advanced
xxxxxxx	Pharmaceutical Technologies
xxxxxxx	Advanced Quantum Chemistry

DE IV	
xxxxxxx	Biopolymers
xxxxxxx	Surface Chemistry and Catalysis
xxxxxxx	Computer Aided Drug Design
xxxxxxx	X-ray Crystallography
xxxxxxx	Biosensors

DE V	
xxxxxxx	Chemistry of Surfactant and Pesticides
xxxxxxx	IPR
xxxxxxx	Medicinal Chemistry
xxxxxxx	Non-equilibrium Thermodynamics



PH.D. PROGRAM

The Department of Chemistry at Jaypee Institute of Information Technology (JIIT), Noida, offers a comprehensive and research-intensive environment for students pursuing doctoral studies in chemistry. The department strongly promotes interdisciplinary research by collaborating with other departments including Biotechnology, Electronics and Communication Engineering, and Computer Science. This integrated approach helps scholars explore emerging research areas and apply chemistry in innovative ways. Ph.D. scholars undertake focused and original research under the mentorship of experienced faculty members. The research work spans a minimum duration of three years and is expected to make a meaningful contribution to the field of study. The scholars are required to engage in Advanced Course work and deliver seminars on their research progress regularly to publish their work. They are also required to take-up some advanced level course work. The program nurtures analytical thinking, creativity, and independence, providing scholars with a strong foundation for careers in academia, industry, or research and development. Upon completion, scholars submit a comprehensive thesis that reflects the outcomes of their research and the depth of their contribution to the scientific community.



SCHOLARSHIPS

Shaping the future for tomorrow

MSc Fee Waiver
Up to 50%



Ph.D. Scholarship
- ₹45,000/month



We believe in empowering the next generation of chemists. Fueling their curiosity and passion for discovery. By providing tools, knowledge, and mentorship, We inspire innovation that shapes the future of science. Together, we build a brighter world through chemistry.



Career Opportunities

- **M.Sc. Chemistry Graduates**
- Analytical Chemist
 - Organic / Material / Environmental Chemist
 - Product Development Officer
 - Quality Control & Assurance Officer

- **Ph.D. Chemistry Graduates**
- Researcher or Professor in Universities
 - R&D in Pharma, Chemical & Biotech Industries
 - Quality Control & Product Formulation
 - Interdisciplinary Careers
 - Science Communication
 - Data Science
 - Patent Law
 - Environmental Consulting



Faculty Profile



Prof. Pammi Gauba – Biotechnology & nanobiotech; biosensors, nanomedicine, soil/water remediation, sustainable tech.

Prof. Sudha Srivastava – Nanomaterials for biomedicine; biosensors, diagnostics, nanoparticle vaccines.

Dr. Gunjan Purohit – Nanomaterials in catalysis, organic synthesis, SPF blockers, jet fuels, lubricants.

Dr. Haneesh Saini – MOFs/MOPs, membranes for water purification, oil–water separation, sustainability.

Dr. Neakanshika Chadha – Porous graphene, carbon nanomaterials, e-waste management, foams, energy storage.

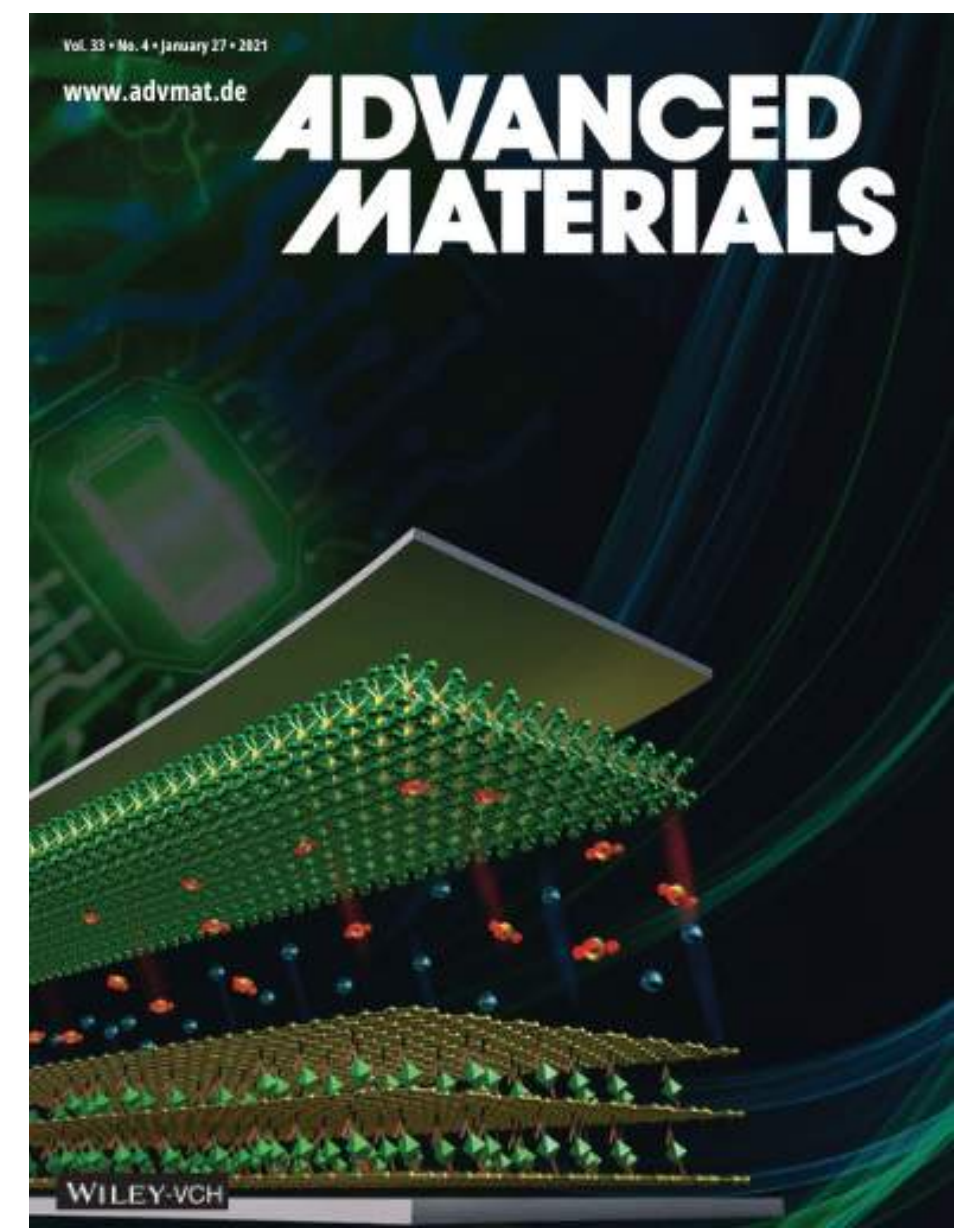
Dr. Nishant Yadav– Materials chemistry for electrochemical storage, catalysis, synchrotron studies, next-gen batteries.





THRUST AREAS

- Catalysis
- Synthetic Chemistry
- Supramolecular Chemistry & Materials
- Interdisciplinary Technologies & Innovative



Research Excellence

✓ Our Chemistry Department offers state-of-the-art laboratories equipped with modern instruments that support advanced research. Our faculty members are dedicated to fostering a dynamic learning environment where students engage in hands-on experiments and cutting-edge projects.

We emphasize innovation, critical thinking, and problem-solving skills, preparing our students to tackle real-world challenges.

Through partnerships with industry and research institutions, we provide opportunities for internships and collaborative research that broaden academic and professional horizons.

Key Facilities

- LC-MS/MS & GC-MS/MS – High precision molecular analysis
- HPLC – Advanced separation & purification
- **Atomic Absorption Spectrometer (AAS)** – Metal detection & analysis
- UV-Vis Spectrophotometer – Optical property studies
- Zeta Potential & Particle Size Analyzer – Nanomaterial characterization
- Pressure Reactors & Pilot Scale Units – Applied & industrial chemistry



CURRENT RESEARCH ACTIVITIES



01

COLLABORATIONS

- All India Institutes of Medical Sciences (AIIMS), New Delhi
- Central Pollution Control Board (CPCB), New Delhi
- Jamia Hamdard, New Delhi
- Jamia Millia Islamia, New Delhi
- PGIMER, Chandigarh



03

PATENTS, AWARDS AND RECOGNITIONS

- Patents Granted: 3
- Patent applications Published: 4
- Technology Transfer: 1



02

SPONSORED PROJECTS

- 5 ongoing Projects
- (INR~2.5 Crores)
- 11 Completed Projects (INR~2.6 Crores)
- 3 Completed Industry Projects



04

PUBLICATIONS

- Publications: 137
- Faculty Publications \geq 50 citations: 6
- Scopus Indexed Publications: 120

RESEARCH PUBLICATIONS



S No.	Name of Journal	Impact Factor (Thomson Reuter)
1	Environmental Chemistry Letters	15.7
2	Biosensors and Bioelectronics	12.8
3	Journal of Advanced Research	10.5
4	Sensors and Actuators: B Chemical	8
5	International Journal of Biological macromolecules	7.7
6	ACS sustainable Chemistry and Engineering	7.1
7	ChemCatChem	5.5



**JOIN THE DEPARTMENT OF CHEMISTRY AT JIIT –
SHAPE THE FUTURE OF CHEMISTS WITH US!**

Department of Chemistry,
Jaypee Institute of Information Technology (JIIT),
Noida, Uttar Pradesh, India



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PHOTO GALLERY


DEPARTMENT OF CHEMISTRY
JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, NOIDA
 is Organising

ONE DAY WEBINAR


Careers in Chemistry: From Lab To Industry and Beyond


- Discover Diverse Career Paths after Bsc Chemistry.
- Learn How Chemistry Leads to Industry, Academia & Startups.
- Explore Interdisciplinary Opportunities in Chemistry.
- Get Inspired by Talks from Top Scientists & Industry Leaders.


Opening Remarks:  **Prof. B. R. Mehta**
 Hon'ble Vice Chancellor,
 JIIT, NOIDA


Welcome Address:  **Prof. Pammi Gauba**
 HoD Chemistry, JIIT, NOIDA

12 JUNE 2025
10 AM ONWARDS


Prof. R. K. Parashar
 Chemistry Dept.
 Delhi University


Prof. S. K. Mehta
 Chemistry Dept.
 Panjab University



Dr. Ravindra Singh
 Head and Director R&D
 Merck, Bangalore


Prof. Sudha Srivastava
 Coordinator, Chemistry
 Dept., JIIT, NOIDA

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SCAN ME 

Opening Remarks: Hon'ble Vice Chancellor, JIIT, NOIDA



Prof. B. R. Mehta
 Hon'ble Vice
 Chancellor,
 JIIT, NOIDA

- Prof. Bodh Raj Mehta has been working as Vice Chancellor since February 2023 at JIIT.
- Before joining Jaypee university system, he has about 37 years of teaching, research and administrative experience at Indian Institute of Technology Delhi and has worked as Dean (Research and Development) and Schlumberger Chair Professor.
- He has received life-time achievement award 2021 from IIT Delhi for his outstanding contributions to scientific research and teaching.
- He has supervised about 40 Ph.D scholars during his stay at IIT Delhi. He has published about 250 manuscripts in peer reviewed international journals and about 300 publications and invited lectures in national and international conferences.
- He has successfully completed 55 sponsored research projects from national and international funding agencies.
- In addition to VC at JIIT, he is also looking after the research and innovation activities at all the Jaypee Universities as Director, the Directorate of Research, Innovation and Development.



9:36 AM | uvd-ozcz-ibo

Prof. R. K. Parashar
 Dept. of Chemistry
 University of Delhi, India

- Professor Rakesh Kumar is a distinguished Professor of Chemistry at the University of Delhi, specializing in Synthetic Organic Chemistry, Medicinal Chemistry, and Chemosensors.
- He holds a Ph.D. from the University of Delhi (1990) and completed his M.Sc. and B.Sc. from Guru Nanak Dev University.
- Prof. Kumar has received prestigious fellowships, including Postdoctoral Fellowships in Portugal and Spain, as well as CSIR (NET) JRF & SRF awards.
- His research focuses on the development of heterocyclic compounds, glycosidase inhibitors, anticancer agents, and chemosensors for metal ion and biomolecules detection in biological and environmental samples.
- With over 30 years of teaching experience, he has supervised 14 Ph.D. scholars (B ongoing) and contributed to 70+ research

Dr. Ravindra Vikram Singh,
 Ph.D., FRSC (IUK)
 Director and Head-India R&D,
 Technology and Innovation

- Dr. Ravindra is a dynamic, results-oriented leader with nearly 30 years of research experience, including 25+ years of industry expertise (post-Ph. D).
- Known for driving business transformation, innovation, and value creation, his expertise spans R&D, Manufacturing, and Technology Development.
- He earned his M.Sc. and Ph.D. from Lucknow University (1999) and began his career at Lupin Pharmaceuticals.
- He later held key roles at GE India Technology Centre (2002-2007), Jubilant Life Sciences (2007-2010).
- He joined Sigma Aldrich Chemicals (an affiliate of Merck KGaA, Darmstadt, Germany), Bangalore in 2010 as Principal Scientist, and presently he is serving as its Director and

Prof. S. K. Mehta
 Department of
 Chemistry,
 Panjab University,

- Dr. Surinder Kumar Mehta is a distinguished Professor in the Department of Chemistry at Panjab University, Chandigarh, India.
- He holds an M.Sc. and Ph.D. from Panjab University and specializes in physical chemistry, with a focus on nanochemistry, colloidal chemistry, and drug delivery systems.
- He served as the Chairman of the Department of Chemistry from 2011 to 2014, as the Director of the Sophisticated Analytical Instrumentation Facility (SAIF), Panjab University, from 2015 to 2019 and Vice-Chancellor of the University of Ladakh, from 2021 to 2025.
- Over 463 publications, four patents and 36 book/chapters. He has an h-index of 70 and more than 17350 citations.
- His work has been recognized internationally, earning him fellowships from the German Academic Exchange Service (DAAD) and the Japan Society for the Promotion of Science (JSPS), as well as awards such as